

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003767**Date Inspected:** 01-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 2200**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector Sherri Brannon arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QA Inspector observed and or discovered the following.

OBG-Deck Panel Closed Rib PMT #1:

Caltrans QA observed ZPMC MT Technician Bo Tin Yue perform MT on PMT #1 and accept.

Caltrans QA Inspector monitored the welding for the PMT; closed ribs were welded on one single plate. PMT associated with OBG Deck Panels identified as DP147-001 (5 closed rib panel) and DP440-001 (5 closed rib panel). The welding was completed on weld gantry number 1. ZPMC CWI Chen Xi and ABF Lu Yun REJECTED weld # 3 for PMT #1. PMT was removed from the Gantry.

OBG-Deck Panel Closed Rib PMT #2:

Caltrans QA Inspector observed ZPMC MT Technician Bo Tin Yue perform MT on the PMT#2 tack welds for DP147-001 (5 closed rib panel) and DP440-001 (5 closed rib panel). Closed U-ribs were tack welded on one single plate. ZPMC MT Technician Bo Tin Yue and ZPMC CWI Chen Xi REJECTED tack welds in weld #4 and #2 for cracks. PMT was removed from the Gantry.

NOTE: ZPMC attempted to repair the cracked tack welds. Cracked track welds were removed by grinding and re-welded two times and both attempts to repair failed due to cracks in the tack welds. PMT was removed from the Gantry.

OBG-Deck Panel Closed Rib PMT #3:

WELDING INSPECTION REPORT

(Continued Page 2 of 2)

Caltrans QA observed ZPMC MT Technician Bo Tin Yue perform MT on PMT #3 and accept. Caltrans QA performed MT on PMT #3 and found indication in weld # 4, 5 & 6. Indications were removed by grinding. Caltrans QA re-MT weld #4, 5 & 6 and found it to be ok.

Caltrans QA Inspector monitored the welding for the PMT; closed ribs were welded on multiple plates. U-rib for weld #1 and #2 were on one single plate and U-ribs for weld #3 ~ #6 were on one single plate. PMT associated with OBG Deck Panels identified as DP147-001 (5 closed rib panel) and DP440-001 (5 closed rib panel). The welding was completed on weld gantry number 1. ZPMC successfully completed the welding of said PMT on the third attempt. Caltrans QA Inspector observed ZPMC complete and accept the VT and UT of the PMT for the above deck panels.

OBG-PMT#3 Deck Panel DP147-001 and DP440-001 Marco-etch

Macro-etch samples for said PMT #3 were accepted by ZPMC QC, ABF and Caltrans QA.

OBG-PMT#1, #2 & #3 and Deck Panel DP147-001 and DP440-001

All tack welds are 5mm to 10mm on either side of the 75mm tack weld.

OBG Deck Panel Closed Rib DP440-001

At 2330 DP440-001 was in the staging area and 2 areas had not been tack welded. ZPMC was observed tack welding DP386-001 until 0120.

At approximately 0445 ZPMC started tack welding DP386-001 and started tack welding DP440-001 at approximately 0453. Tack welding of DP440-001 was incomplete at the end of the shift.

NOTE: Caltrans QA also observed the welder's tack welding DP386-001 & DP440-001 and noticed the welder was "backfilling" the crater at the end of the tack, the welding wire speed slowed dramatically. This reduction in the wire speed also drastically reduced the welding amperage and the voltage as measured by ZPMC CWI Chen Xi meter. Caltrans QA also, recorded a video of the tack welding process.

Summary of Conversations:

No relevant conversations to report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Ady Velasco 13816942685, who represents the Office of Structural Materials for your project.

Inspected By:	Brannon, Sherri	Quality Assurance Inspector
----------------------	-----------------	-----------------------------

Reviewed By:	Lanz, Joe	QA Reviewer
---------------------	-----------	-------------
